



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: B. Ryland Wiggs
Serial No.: 10/616,701
Filed: July 10, 2003
For: Sealed Well Direct Expansion Heating And Cooling System, An Optional Geothermal Heating And Cooling System Solar Heating Supplement, And An Optional Geothermal Heating And Cooling System Water Cooled Supplement
Group Art Unit: 3744
Examiner: Mohammad M. Ali
Attorney's Docket No.: N9556
Customer No.: 23456

DECLARATION OF B. RYLAND WIGGS

1. I, B. Ryland Wiggs, do hereby declare and affirm that I am the named inventor in this application. I have read the Office Action issued in this application on December 5, 2005 including the Balch patent cited in the Office Action.

2. I have been active in the Direct Expansion/Direct Exchange ("DX") geothermal heat pump field for over 15 years. I have received multiple DX related patents. I am a former Chairman of the California Energy Commission's Geothermal Heat Pump Sub-Committee For Geothermal Heating/Cooling. I was an active member of the Canadian Standards Committee to develop a national Canadian DX system testing standard (as opposed to air-source heat pump testing standards, and as opposed to water-source geothermal heat pump testing standards). The DX system testing standards developed by my Canadian

committee were subsequently accepted for DX system efficiency certifications in the U.S.A. via A.R.I.

3. The primary objective of a DX system is to increase system operational efficiencies. The ability to increase overall DX system operational efficiencies is of paramount importance. No known prior DX system art, over the past 20 years, has ever encompassed the placement of a solar heat collector/exchange system in a designated position above a DX system refrigerant to solar heat exchange fluid heat exchange means, so as to eliminate the necessity of a solar heat exchange fluid circulating pump. Such a placement provides a material energy expenditure savings in the elimination of a circulating pump power requirement. The subject placement and design has not been obvious to those skilled in the art as it has never been heretofore claimed or done; and that the result is a significant overall operational efficiency increase to such a solar assisted DX system operating in the heating mode.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

B. Ryland Wiggs
B. Ryland Wiggs

June 5, 2006
Date



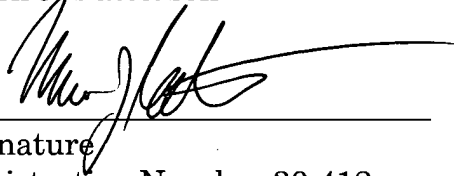
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I hereby certify that this Declaration in Application Serial No.10/616,701 having a filing date of July 10, 2003, is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

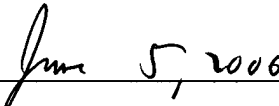
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on June 5, 2006.

Mark J. Patterson



Signature
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